

NWS Form E-5 (04-2006) (PRES. BY NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) Burlington VT
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR July 2015
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE /s/ Gregory A. Hanson, SH WFO BTW DATE 8/10/2015

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

☐ An X inside this box indicates that no flooding occurred within this hydrologic service area.

July was a transition month as a very wet June transitioned to drier conditions. There were some episodes of heavy rainfall and flash flooding, with one devastating flash flood event on July 19 mainly concentrated in the Plainfield and Barre area. Overall rivers were in recession during July, although flows were still above normal (Fig 1) in response to the very wet June. There was no main-stem river flooding, and no River Flood Warnings were issued.

The month started off rainy with minor flooding in the Champlain valley. A weak surface boundary lay southwest to northeast across the eastern Adirondacks into northwest Vermont, and waves moved along the boundary. Temperatures were cool, only in the 70s however warmer air aloft supported warm rainfall processes and the central Champlain Valley received 1.5 to 2 inches of rain (Fig 2). Minor street flooding was reported in Burlington and South Burlington VT, and water covered some roadways in Peru New York. A Flash Flood Warning was issued for the northern Champlain Valley.

In the following weeks through mid-July there were scattered showers and thunderstorms associated with periodic frontal boundaries, however there were no hydrologic issues. Sadly, on July 4 there was a death in Huntington Gorge, where waters swollen by a previous night's ½ to ¾ inch rainfall swept a hiker to her death when she slipped off a rock.

On July 13 a Flash Flood Warning was issued for southeast Addison County when a series of thunderstorms moved over an area of the Green Mountain National Forest south of Route 125. Radar indicated three to four inches of rain in a couple of hours, however most of the rain was in a wilderness area no flooding was found.

On July 19 an area of thunderstorms caused devastating flash flooding in central Vermont. Thunderstorms developed in very warm humid air ahead of an approaching cold front and repeatedly moved over the same area. Much of east central and northeast Vermont received in excess of 2 inches of rain through the afternoon and evening (Fig 3). The most severe flash flooding was in Barre and Plainfield Vermont, with Gunners Brook in Barre and Great Brook in Plainfield causing the most damage. There were widespread bridge washouts, culvert failures, and damage to roads from flood waters, and slope failures and erosion carried a tremendous amount of mud, silt, and debris into Barre where roads and property were covered in several inches of muck (Figs 4-8). Flash flooding also occurred further north in Hardwick Vermont where water covered roadways and in East Montpelier. Flash flood warnings were issued for this event with about an hour lead time for the flooding in Barre and Plainfield. Despite the severity of the flooding the event did not qualify for a federal disaster declaration.

A flood warning for the Wells River at Wells River was issued early morning of July 20 as flood waters moved downstream.

The final hydrologic event of July was late on the 26th into the 27th, when a flash flood warning was issued for southeast Addison County. Radar indicated a nearly stationary thunderstorm dumping over two inches of rain in an hour. Forest service Roads were reported washed out as a result.

By the end of July the northern third of Vermont saw rainfall at least an inch above normal and some areas received over two inches above normal rainfall. It was a different story in the Adirondacks and southern Vermont, where rainfall totals were an inch or more below normal.

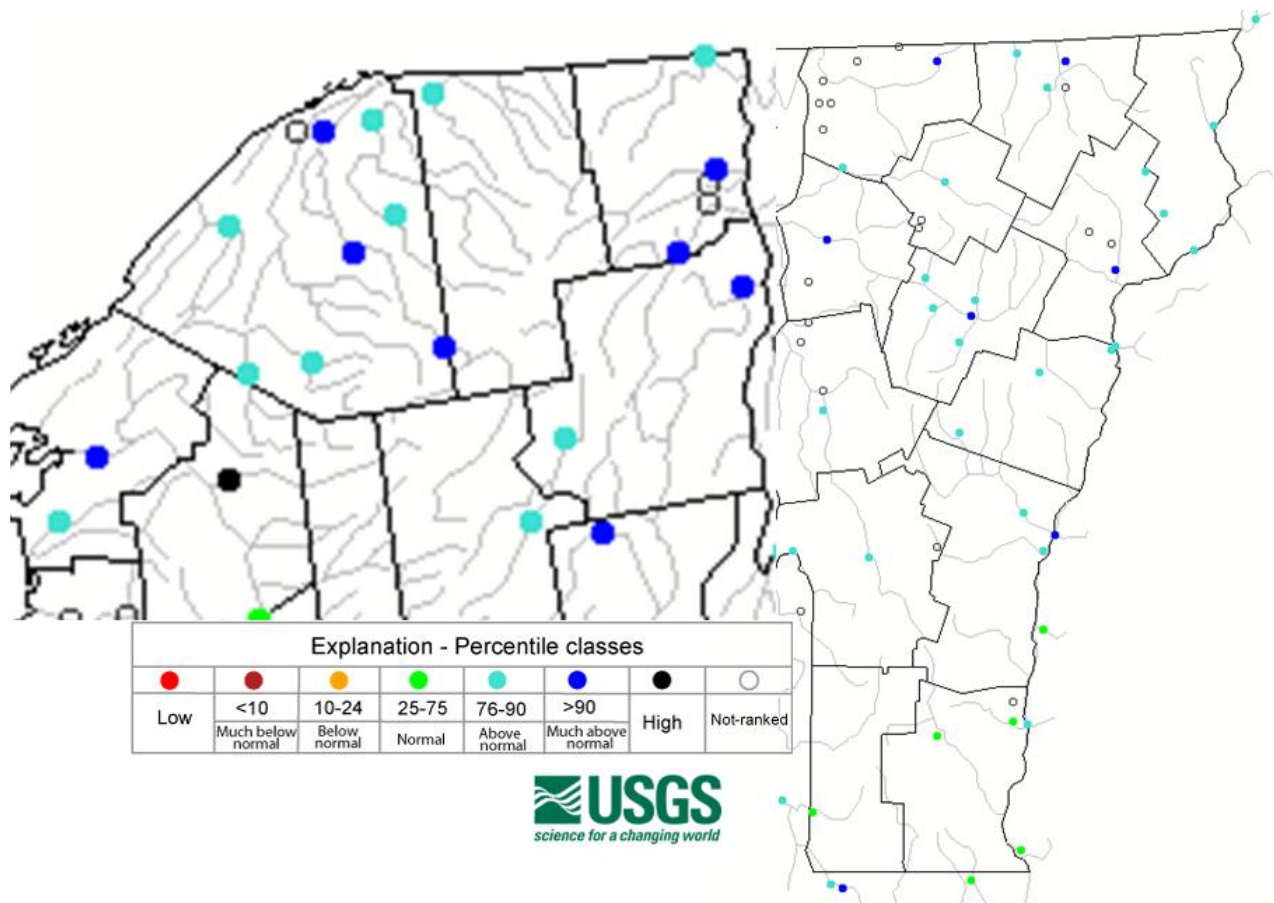
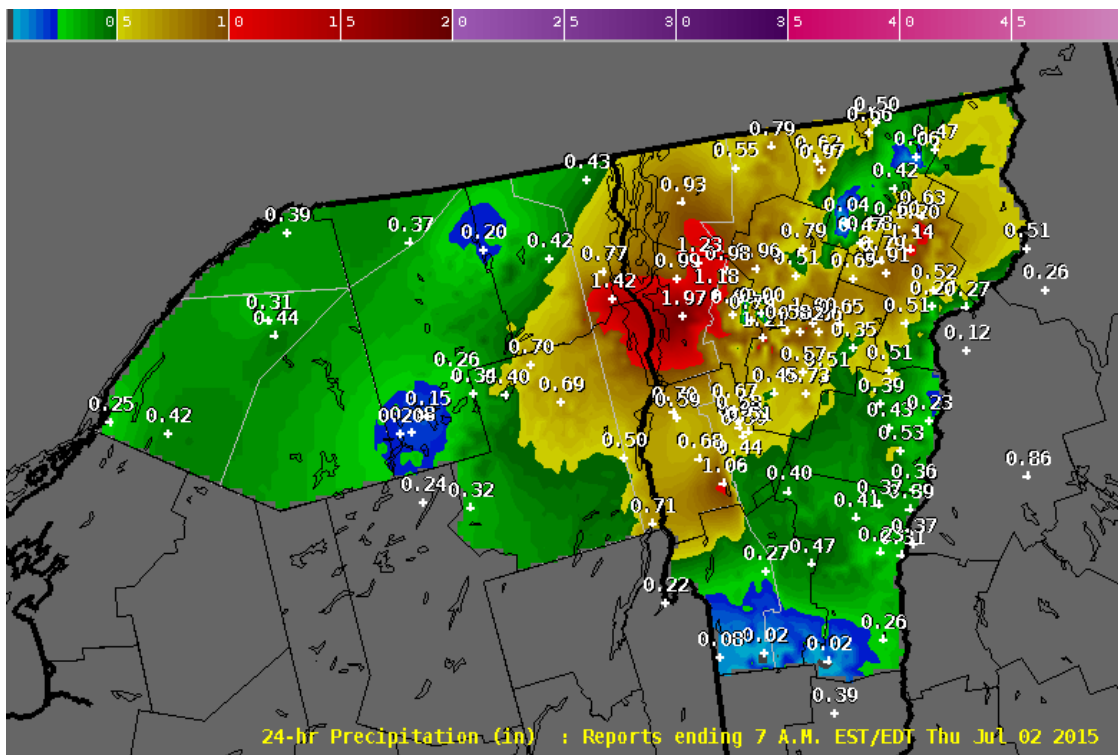


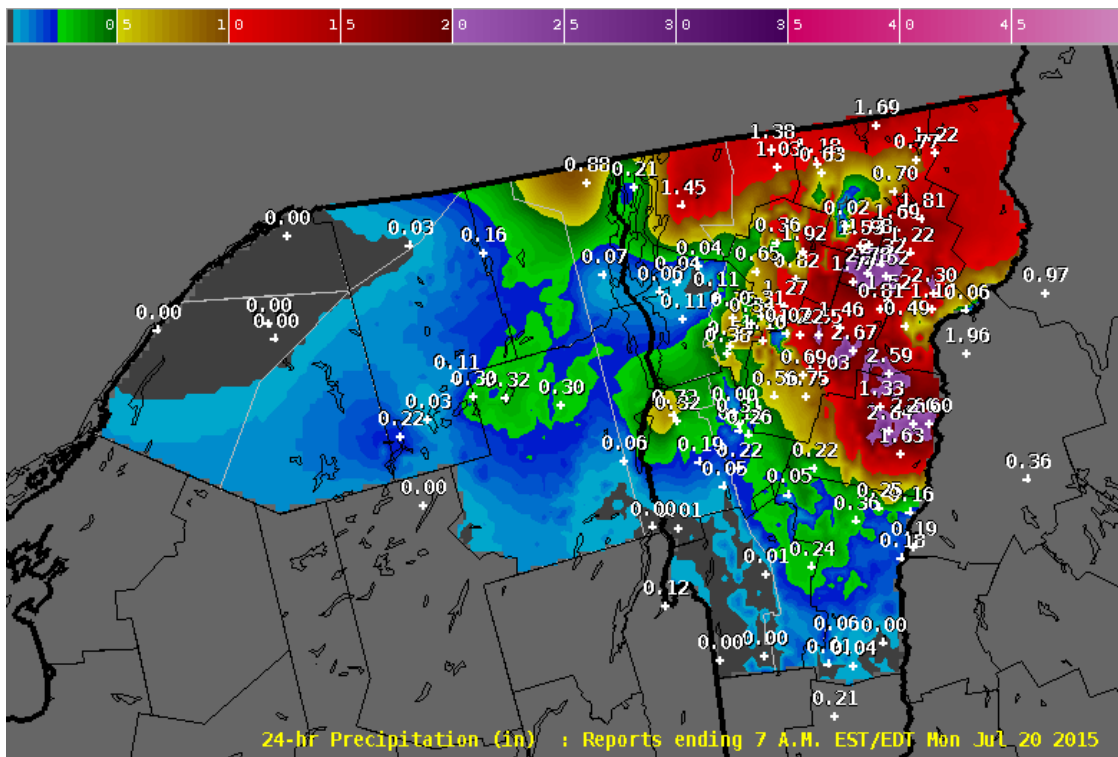
Figure 1, Monthly average streamflow, July 2015



NOAA / National Weather Service Burlington, Vermont

Graphic created: Thu Jul 02 2015 10:43 AM EDT

Figure 2



NOAA / National Weather Service Burlington, Vermont

Graphic created: Mon Jul 20 2015 4:23 PM EDT

Figure 3





Figure 4, Barre VT



Figure 5, Barre VT



Figure 6, Road, guardrail, and slope damage on Gunners Brook, Barre Town VT



Figure 7, Road & guardrail damage on Gunners Brook at Cummings Rd Barre VT



Figure 8 Road damage from Great Brook, Plainfield Town VT

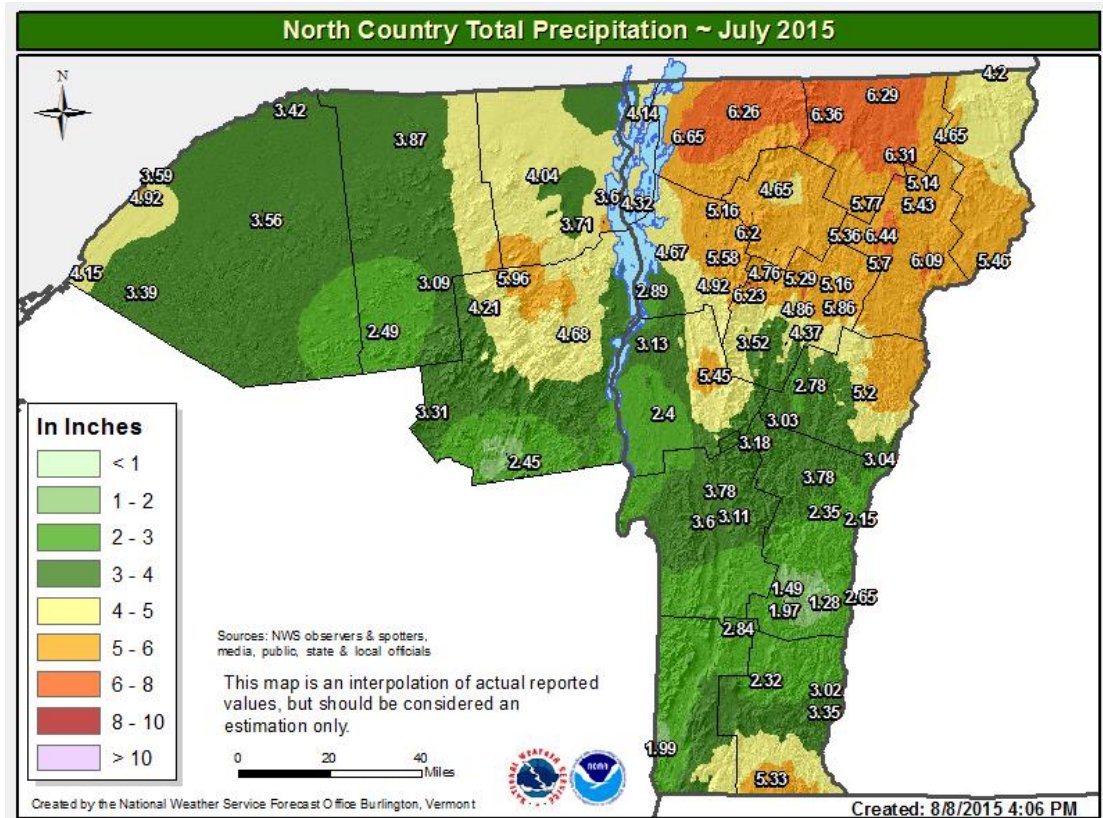


Figure 9

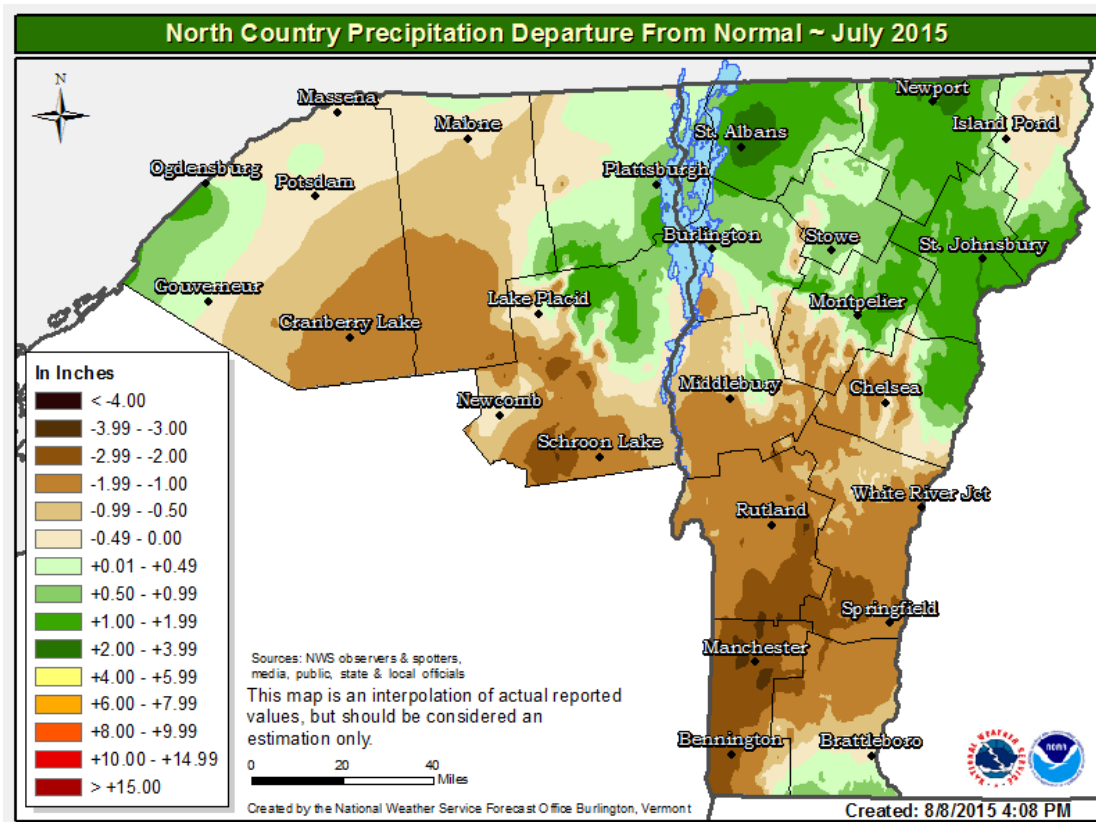


Figure 10

**Significant River Crests
July 2015
WFO Burlington VT**

River	Location	NWSLI	Flood Stage	Crest (ft)	Time (UTC)
East Branch Ausable	Ausable Forks NY	ASFN6	7.0	5.52	1 July 22:30
Barton River	Coventry VT	COVV1	8.0	5.92	20 July 16:00
Lamoille River	Johnson VT	JONV1	13	10.14	20 July 13:45
Lamoille River	Jeffersonville VT	JVLV1	450	446.14	20 July 19:30
Winooski River	Montpelier VT	MONV1	15	9.41	20 July 04:45
Passumpsic	Passumpsic VT	PASV1	14	9.13	20 July 09:30
East Branch Passumpsic	East Haven VT	EHVV1	6.5	5.78	20 July 04:15
Wells River	Wells River VT	WLRV1	6.0	6.30	20 July 09:30